

What is claimed:

1 1. A method of programmatically computing street intersections using street geometry,
2 comprising steps of:
3 obtaining street geometry information for a first street;
4 comparing the object street geometry information for the first street to obtained street
5 geometry information for one or more other streets to determine intersecting ones of the one or
6 more other streets; and
7 for each of the intersecting ones, storing a geographic location of a point of the
8 intersection, along with an identification of the first street address and the identification of the
9 intersecting one.

10 2. The method according to Claim 1, wherein the obtained street geometry information
11 originates from textual address information.

12 3. The method according to Claim 1, wherein the geographic location comprises latitude and
13 longitude values of the obtained intersection point.

14 4. The method according to Claim 1, wherein the geographic locations are stored as
15 geometric data.

16 5. The method according to Claim 1, wherein the storing step further comprises the step of
17 storing a reciprocal comprising the geographic location of a point of the intersection, along with



the identification of the intersecting one and the identification of the first street address.

6. The method according to Claim 1, wherein the obtained street geometry information is retrieved from a database table.

7. The method according to Claim 1, wherein the obtained street geometry information is dynamically computed from textual address information.

8. The method according to Claim 1, wherein the step of comparing the obtained street geometry further comprises the step of comparing a geometric line representation of the first street to the geometric line representation of each of the one or more other streets.

9. The method according to Claim 8, wherein the step of comparing the obtained street geometry further comprises the step of comparing a bounding box corresponding to the geometric line representation of the first street to the bounding box corresponding to the geometric line representation of each of the one or more other streets, as a precondition to the step of comparing the geometric line representations wherein the step of comparing the geometric line representations is only performed if the step of comparing the bounding boxes determines a potential intersection.

10. The method according to Claim 1, further comprising the step of repeating the obtaining, comparing, and storing steps for at least one of the one or more other streets.

1 11. The method according to Claim 1, wherein the storing step further comprises the step of
2 creating or updating a row in a relational database table.

1 12. A system for programmatically computing street intersections using street geometry,
2 comprising:

3 means for obtaining street geometry information for a first street;

4 means for comparing the object street geometry information for the first street to obtained
5 street geometry information for one or more other streets to determine intersecting ones of the
6 one or more other streets; and

7 for each of the intersecting ones, means for storing (1) a geographic location of a point of
8 the intersection, along with an identification of the first street address and the identification of the
9 intersecting one, in a relational database table; and (2) a reciprocal comprising the geographic
10 location of a point of the intersection, along with the identification of the intersecting one and the
11 identification of the first street address.

1 13. The system according to Claim 12, wherein the geographic location comprises latitude and
2 longitude values of the obtained intersection point.

1 14. The system according to Claim 12, wherein the means for comparing the obtained street
2 geometry further comprises means for comparing a geometric line representation of the first street
3 to the geometric line representation of each of the one or more other streets.

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1 15. The system according to Claim 14, wherein the means for comparing the obtained street
2 geometry further comprises means for comparing a bounding box corresponding to the geometric
3 line representation of the first street to the bounding box corresponding to the geometric line
4 representation of each of the one or more other streets, as a precondition to operation of the
5 means for comparing the geometric line representations wherein the means for comparing the
6 geometric line representations is only performed if the means for comparing the bounding boxes
7 determines a potential intersection.

1 16. A computer program product for programmatically computing street intersections using
2 street geometry, the computer program product embodied on one or more computer-readable
3 media and comprising:

4 computer-readable program code means for obtaining street geometry information for a
5 first street;

6 computer-readable program code means for comparing the object street geometry
7 information for the first street to obtained street geometry information for one or more other
8 streets to determine intersecting ones of the one or more other streets;

9 for each of the intersecting ones, computer-readable program code means for storing (1) a
10 geographic location of a point of the intersection, along with an identification of the first street
11 address and the identification of the intersecting one, in a relational database table; and (2) a
12 reciprocal comprising the geographic location of a point of the intersection, along with the
13 identification of the intersecting one and the identification of the first street address; and

computer-readable program code means for repeating operation of the computer-readable program code means for obtaining, computer-readable program code means for comparing, and computer-readable program code means for storing, for at least one of the one or more other streets.

17. The computer program product according to Claim 16, wherein the computer-readable program code means for comparing the obtained street geometry further comprises:

computer-readable program code means for comparing a bounding box corresponding to the geometric line representation of the first street to the bounding box corresponding to the geometric line representation of each of the one or more other streets; and

computer-readable program code means for comparing a geometric line representation wherein the means for comparing the geometric line representation of the first street to the geometric line representation of each of the one or more other streets, if the computer-readable program code means for comparing the bounding boxes determines a potential intersection.